UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/931,645	08/15/2001	Indermohan S. Monga	14983BAUS01U	2703

34845 7590 01/29/2007
McGUINNESS & MANARAS LLP
125 NAGOG PARK
ACTON, MA 01720

EXAMINER	
BARQADLE, YASIN M	
ART UNIT	PAPER NUMBER
2153	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/29/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	09/931,645	MONGA ET AL.	
	Examiner	Art Unit	
	Yasin M. Barqadle	2153	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 August 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-39* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-39* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *08/21/2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on August 07, 2006 has been entered.

Response to Amendment

2. The amendment filed on August 07, 2006 has been fully considered but are not persuasive.

Response to Amendment

3. In response to applicant's argument in page 13, that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or

motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the examiner provided motivation from the reference suggesting that because it is capable of delivering an acceptable level of performance that is both efficient and economical [¶ 0014].

In essence Applicant argues, "The combination of Levandovsky and Busuioc fails to describe or suggest all of the elements of the claims." (Page 13 seconds paragraph. Examiner notes that the rejections are based on combination of Busuioc and Levandovsky as explained in the office action. Furthermore, Busuioc teaches " software agents of more than one type and the service management agents which have control over nodes of the network enter a negotiation process with customer agents in the provision of new services, so as to meet the constraints of both customer requirements and the interest of the relevant service provider. In the event of agent failure, the service management agents initiate a bidding process to reallocate the responsibilities of a failed agent." Abstract. Additionally, Busuioc teaches, "A Multi-Service Network (MSN) is any network that is capable of supporting a range of services. The Pan-

European Integrated Broadband Network investigated in a European PACE initiative, and referred to in the paper 'Broadband Communication Management--The RACE TMN Approach... Furthermore, the trend in such networks is towards global networks where the MSN can span many countries, hence the emergence of GMSNs." (Col. 1, lines 43-58). Therefore, such a network will inherently include both UNI and a peep-to-peer interface as admitted by the applicant see last paragraph of page 14. Applicant continues to argue that "neither Busuioc, Levandovsky nor the combination thereof teach an agent having both the UNI and the Peer-to-Peer interface, as recited in the claims." Page 14, last paragraph. Examiner respectfully disagrees. Busuioc teaches "Conveniently, there may be one software agent, a SMA 5, situated at each of the GMSN nodes 3, each SMA 5 monitoring its underlying switch 3 as well as the links 2 extended to the switch 3... Referring to FIG. 2, in order to play its role within the control network 4, each SMA 5 has to have well structured knowledge and the capability to use that knowledge in cooperating with other agents 5,6." (Col. 5, lines 10-36). Therefore, Busuioc's clearly teaches an agent situated at each GMSN node 3 and monitoring underlying switch as well as the links 2 as shown in fig. 1. In the above context network 1 in Fig. 1 shows agent 5 residing on node 3 where link 2 connects nodes connected to agent 5 and

agent 6 in network 4. (See also col. 5, lines 13-65 and col. 7, lines 27-51).

In response to Applicant's argument that the Examiner "refers the Applicant to a paper... not used to reject to support a rejection of the claims" page 15, second paragraph. Examiner addressed this argument during the Advisory action. Examiner notes the paper in question was quoted from Busuioc reference. See col. 1, lines 42-58).

- Claims 1-39 are presented for examination

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 6,226,273 (Busuioc et al,

hereinafter " Busuioc") in view of U.S. Pub. No. 20020063915 (Levandovsky et al. (hereinafter "Levandovsky").

As per claim 1-2, Busuioc et al teach a service agent for managing connection establishment and related services for a user in a communication network, the service agent comprising:

a user-to-network interface (UNI) for interfacing with the communication network (fig. 1, CA 6, customer interface to the communication network col. 4, lines 58-64 and col. 5, lines 20-52)

authentication logic for controlling access by the user to the UNI (clients/customers with SLA contracts imply accessing securely controlled information that needs authentication col. 2, lines 28-56);

a peer-to-peer interface for interfacing with peer users (fig. 1, node 3 and/CA 6 col. 5, line 6-36); and

service logic, coupled to the UNI and the Peer-to-peer interface for managing the communication network in accordance with said connection establishment and related services for the requested by the user (the establishment and restoration of links is carried by System Management Agent (SMA5) to meet customer satisfaction service requirements fig. 1, col. 3, lines 22-26 and col. 5, lines 10-65 and col. 7, lines 27-51).

Although Busuioc shows substantial features of the claimed invention including a communication network that is capable of supporting a range of services, he does not explicitly show an optical communication network that comprises an automatically switched optical/transport network (ASON), and wherein the UNI comprises an ASON UNI.

Nonetheless, this feature is well known in the art and would have been an obvious modification of the system disclosed by Busuioc, as evidenced by Levandovsky USPUB (20020063915).

In analogous art, Levandovsky whose invention is about a method for validating a path through a switched optical network, disclose an optical communication network that comprises an automatically switched optical/transport network (ASON), and wherein the UNI comprises an ASON UNI. [fig. 1, 110,120 and 156 ¶ 0014, page 1].

Giving the teaching of Levandovsky, a person of ordinary skill in the art at the time of the invention would have readily recognized the desirability and the advantage of modifying Busuioc by employing the a switched optical network system of Levandovsky, because it capable of delivering an acceptable level of performance that is both efficient and economical [¶ 0014].

Levandovsky further teaches where "the optical network 100 is a switched optical network that includes a first sub-network 130 and a second sub-network 140. The first and second sub-networks 130 and 140 include a plurality of elements such as cross-connects, regenerators, optical amplifiers, wavelength multiplexors, optical fiber links and other network elements that transmit, route, and process optical signals. Blocks 131-134 and 141-143 may represent optically transparent photonic cross-connects (PXCs) or Add/Drop Multiplexors (OADMs) or Optical-Electronic-Optical cross-connects (OEO-OXCs) or Add/Drop Multiplexors (OEO-ADMs) in the optical network 100. Lines 151-157 and 161-164 may represent optical fiber links, regenerators, optical amplifiers or other devices in the optical network 100 that connect various OXCs and ADMs to one another. Blocks 110 and 120 represent clients that request a path connection through the optical network 100. The clients may be IP routers, ATM switches or other devices" (fig. 1-3 and ¶ 0014-0016)

As per claim 3, Busuioc as modified teaches wherein the optical service logic comprises:

negotiation logic for negotiating various connection and connection-related services on behalf of the user (col. 2, lines 10-27 and col. 5, lines 6-31).

As per claim 4, Busuioc as modified teaches the optical service agent of claim 1, wherein the optical service logic comprises:

modeling logic for modeling at least one connection for the user (fig. 1, col. 2, lines 28-33 and col. 6, lines 54 to col. 7, line26).

As per claim 5, Busuioc as modified teaches optical service agent of claim 1, wherein the optical service logic Comprises:

reservation logic for reserving connection and connection-related service for the user (col. 6, lines 2-6).

As per claim 6, Busuioc as modified teaches optical service agent of claim 1, wherein the optical service logic comprises:

connection establishment logic for establishing a connection for the user (col. 5, lines 1-9 and col. 6, lines 36-48).

As per claim 7, Busuioc as modified teaches optical service agent of claim 3, wherein the negotiation logic comprises at least one of:

logic for obtaining quotes for communication services from one or more providers (col. 3, lines 37-47 and col. 6, lines 52-65);

logic for placing a connection out to bid by one or more providers and managing the bidding process for the connection (fig. 5);

logic for negotiating costs and other parameters for a connection with one or more providers (col. 2, lines 1-30);

logic for buying connection and connection-related services from one or more providers;

logic for selling connection and connection-related services; and

logic for re-selling communication and connection-related services (col. 3, lines 37-47 and col. 6, lines 52-65).

As per claim 8, Levandovsky as modified teaches an optical service agent of claim 1, wherein the optical service logic comprises:

aggregation logic for aggregating multiple optical communication paths over a connection (¶ 0014 and ¶ 0016).

As per claim 9, Busuioc as modified teaches optical service agent of claim 4, wherein the modeling logic

comprises at least one of:

logic for interacting with the optical communication network to obtain information relating to a portion of a connection traversing the optical communication network (fig. 1, and (¶ 0014- 0016 and ¶ 0022-0023).

As per claim 10, Busuioc as modified teaches optical service agent of claim 5, wherein the reservation logic comprises at least one of:

logic for interacting with the peer users via the peer-to-peer interface in order to reserve communication services provided by the peer users (col. 3, lines 22-26; col. 5, lines 1-27 and col. 6, lines 2-6); and
logic for interacting with the optical communication network via the UNI in order to reserve communication services provided by the optical communication network.

As per claim 11, Busuioc as modified teaches optical service agent of claim 1, wherein the optical service logic
comprises bandwidth determination logic for determining bandwidth requirements for a connection (¶ 0023 and ¶ 0039).

As per claim 12, Busuioc as modified teaches the optical service agent of claim 6, wherein the connection establishment logic comprises at least one of:

logic for interacting with the optical communication network in order to set up a communication path having specific attributes (¶ 0025-0026); and

logic for interacting with the peer users via the peer-to-peer interface in order to set up a communication path end-to-end across optical communication network

As per claims 13-15 and 26-27, these claims include similar limitations as addressed in claims 1-2 above, therefore, they are rejected with the same rationale.

As per claims 16 and 28, Busuioc as modified teaches the invention, wherein the optical service logic comprises:

negotiation logic for negotiating various connection and connection-related services on behalf of the user (col. 2, lines 10-27 and col. 5, lines 6-31).

As per claims 17 and 29, Busuioc as modified teaches the invention, wherein the optical service logic comprises:

modeling logic for modeling at least one connection for the user (fig. 1, col. 2, lines 28-33 and col. 6, lines 54 to col. 7, line26).

As per claims 18 and 30, Busuioc as modified teaches the invention, wherein the optical service logic Comprises:

reservation logic for reserving connection and connection-related service for the user (col. 6, lines 2-6).

As per claims 19 and 31, Busuioc as modified teaches the invention, wherein the optical service logic comprises:

connection establishment logic for establishing a connection for the user (col. 5, lines 1-9 and col. 6, lines 36-48).

As per claim 34, this is a method claim with similar limitations as claims 1, 3-5 and 8 combined. Therefore, it is rejected with the same rationale.

As per claims 20 and 35, Busuioc as modified teaches the invention, wherein the negotiation logic comprises at least one of:

logic for obtaining quotes for communication services from one or more providers (col. 3, lines 37-47 and col. 6, lines 52-65);

logic for placing a connection out to bid by one or more providers and managing the bidding process for the connection (fig. 5);

logic for negotiating costs and other parameters for a connection with one or more providers (col. 2, lines 1-30);
logic for buying connection and connection-related services from one or more providers;

logic for selling connection and connection-related services; and

logic for re-selling communication and connection-related services (col. 3, lines 37-47 and col. 6, lines 52-65).

As per claims 21 and 32, Levandovsky as modified teaches the invention, wherein the optical service logic comprises:

aggregation logic for aggregating multiple optical communication paths over a connection (¶ 0014 and ¶ 0016).

As per claims 22 and 36, Busuioc as modified teaches the invention, wherein the modeling logic comprises at **least one** of:

logic for interacting with the optical communication network to obtain information relating to a portion of a connection traversing the optical communication network (fig. 1, and (¶ 0014- 0016 and ¶ 0022-0023).

As per claim 23, Busuioc as modified teaches the invention, wherein the reservation logic comprises at least one of:

logic for interacting with the peer users via the peer-to-peer interface in order to reserve communication services provided by the peer users (col. 3, lines 22-26; col. 5, lines 1-27 and col. 6, lines 2-6); and

logic for interacting with the optical communication network via the UNI in order to reserve communication services provided by the optical communication network.

As per claims 24 and 33, Levandovsky as modified teaches the invention, wherein the optical service logic comprises bandwidth determination logic for determining bandwidth requirements for a connection (¶ 0023 and ¶ 0039).

As per claims 25 and 38, Levandovsky as modified teaches the invention, wherein the connection establishment logic comprises at least one of:

logic for interacting with the optical communication network in order to set up a communication path having specific attributes (¶ 0025-0026); and

logic for interacting with the peer users via the peer-to-peer interface in order to set up a communication path end-to-end across optical communication network (fig. 1).

As per claims 39, Levandovsky as modified teaches the invention, wherein aggregating multiple optical communication paths over a connection comprises:

receiving a first request for a first optical communication path (¶ 0014);

establishing a connection for the first optical communication path (¶ 0014 and ¶ 0025);

receiving a second request for a second optical communication path (¶ 0014 and ¶ 0025); and

mapping the second optical communication path to the connection using a predetermined mapping protocol (¶ 0014 and ¶0025-0026).

Conclusion

The prior made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yasin Barqadle whose telephone number is 571-272-3947. The examiner can normally be reached on 9:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Burgess can be reached on 571-272-3949. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and 703-746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Information regarding the status of an application may be obtained form the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either private PAIR or public PAIR system. Status information for unpublished applications is available through private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have

questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

YB

Art Unit 2153

RUPAL DHA
SUPERVISORY PATENT EXAMINER